Paediatric radiology and outreach projects

RöKo International Donnerstag, 10.05.2018 von 15:45 bis 17:15 Uhr im Raum: Donner

Vorsitz / Moderation: Bannas P / Hamburg, Herrmann J / Hamburg

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<tr>
<th>RÖKO INT 204.1</th>
<th>Outreach in different environments – What is it good for? Helpful or contra-productive?</th>
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<td>15:45 Uhr</td>
<td>Referent(en): Riccabona M</td>
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**Kurzzusammenfassung:** Outreach has become an established approach throughout the “developed” world; it actually is considered a moral responsibility. Not only countries, but many universities and hospitals as well as private initiatives and groups have engaged in various outreach programs. There is a difference between classical medical outreach activities (aiming at improving individual health care and systematically the health system) and emergency aid such as in wars or another specific crisis, the latter usually addressed by NGOs such as MSF. Meaningful outreaches needs to meet some objectives: besides offering help to people in need it should not cause harm - neither to the individual nor to the system, eg. by applying methods or devices not any longer accepted in the developed world. It should be sustainable which can only be achieved if local circumstances are considered and the respective activity is adapted - activities that may fit into one region will not be effective in another. This is demonstrated by the author’s experience in different countries such as in Eritrea (where no sufficient local health care is available for the majority of the (particularly rural) population), in Thailand (where a reasonable infrastructure but no dedicated pediatric imaging expertise has been available), or in Central Eastern European (where in spite of a long-standing and established health care system sufficient access to pediatric imaging specifics or education was lacking resulting in a unsatisfactory service to children).

**Lernziele:** In conclusion, different and adapted set-ups, methods and inputs are needed for optimal support and outreach in different countries and areas. Risks for sustainable improvement such as brain drain, imposing inapplicable approaches and standards, inducing dependency or impairing development of the local systems need to be considered. Then outreach will not only stay an essential activity that hopefully improves health care for individuals and the developing countries, but will continue to enable invaluable personal experience also offering the “helpers” a lot to learn and to broaden their individual horizon which may impact future developments in their countries.

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<th>RÖKO INT 204.2</th>
<th>Ultrasound for pneumonia and TB as a point of care tool when visiting rural settings</th>
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<td>16:15 Uhr</td>
<td>Referent(en): Andronikou S</td>
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Affordable high-quality portable ultrasound machines have allowed for point-of-care ultrasound (POCUS) to develop in medical disciplines outside of radiology departments. POCUS refers predominantly to physician-performed ultrasound at the patient’s bedside, in the emergency room or in clinic settings. This reduces diagnostic times, facilitates rapid clinical decision-making and reduces the burden on radiology departments. The main advantage of ultrasound over other diagnostic imaging tests is that it carries no radiation burden and is virtually risk free, making it ideal for use in children. Other advantages are its relatively low cost, mobility, ease of use and its digital nature, allowing for tele-reading when necessary.

Chest ultrasound is a useful point of care test for diagnosing pneumonia. It is more accurate for diagnosing pleural effusion, alveolar consolidation and alveolar interstitial syndrome than auscultation or chest radiography, and can also be used to diagnose pneumothorax. The addition of mediastinal ultrasound is also useful for identification of lymphadenopathy in children with suspected TB, through the suprasternal approach.

Non-radiologists with limited training have shown a high success rate for diagnosing pneumonia using chest ultrasound. It is important therefore, that radiologists also be familiar with these techniques that are becoming mainstream. This presentation will therefore focus on demonstrating a simplified technique for performing POCUS of the chest for pneumonia. Normal imaging findings in healthy lungs i.e. ‘lung sliding’, A-lines and B-lines as well as examples of common pathologies including consolidation, B+ lines of interstitial syndrome, effusions and pneumothorax will be demonstrated.

The role of POCUS in developing countries and other remote settings with limited resources will be discussed through examples.

Paediatrics and Radiology in Nepal

Nepal is one of the ten least urbanized countries in the world. More than half of the country’s population is younger than 24 years of age. The development of Radiology still suffers from several barriers, especially in the rural areas.

Based on an overview concerning the medical care systems in Nepal the radiological service for in hospital patients and outpatients is presented. Cross sectional imaging like ultrasonography computerized tomography and magnetic resonance tomography is available in medical centers which are mainly associated to universities in larger cities. This makes regular and advanced medical treatments possible in these centers.

In the suburban areas and in the peripheral rural country far away from the cities medical care including radiological service is totally different from the situation in the cities.

The presentation gives an overview of radiological diagnostics, treatment and outcome of pediatric population in Nepal. Two characteristic case reports are demonstrated with typical scenarios: traumatic injury during daily work in a suburban area and diagnostic and treatment of a young patient with oncologic disease in an university hospital.

Finally possible strategies for improvement of medical care including radiological services in Nepal are discussed.